OUTLINE

• Belmont Background and History
• New Contracts
• Belmont Development Plan
• Drilling Results -1st Well
• Drilling Challenges and Solutions
• Redevelopment – Upper, Lower Zones
• Belmont Redevelopment Recap
• Overview and Opportunities
California State Lands Commission Prevention First 2006
Belmont Island Removal and Field Revitalization
Aerial View during Island Removal Activity
Belmont Island Removal and Field Revitalization
Belmont Island Background/History

- Located 8,100 feet offshore Seal Beach, CA in 42 feet of water depth
- Construction completed in 1962
- Oil production ceased 1995. 28 million barrels of oil and 24 billion cubic feet of natural gas. The State $40M revenue and the operation grossed over $240M
- All wells abandoned by 1996
- Complete removal of the platform structure was accomplished in 2002.
Belmont Island Removal Activities

- Wells Plugged and Abandoned
- Cut and Prepare Well Conductors
- Decommission Electrical Cable
- Decommission Pipelines
- Remove South Span and South Tower
- Remove Caisson Deck and Wall Structures
- Remove Hydrocarbon-Impacted Fill, Well Conductors and Wooden Piles
- Remove East Wharf
- Remove Boat Landing
- Remove Strut Supports- West Face
- Remove North Wharf
- Remove Caisson and Rip-Rap
- Debris Recovery
Belmont Upper (Ranger) Performance

- Oil Prod: 789 BOPD
- Water Prod: 4150 BWPD
- Water cut: 84%
- WOR: 5
- Water Inj: 2843 BWIPD
- Producers: 3
- Injectors: 2

Other notes:
- Pipeline restricted
- Waterflood
- Storm destroyed
- Island
- Injection
- Water
- Oil
- Producers
- Injectors
Belmont Contracts

Three Contracts
• Oil and Gas Lease Between OLBI and State of California
• Facilities Agreement Between OLBI and City of Long Beach
• Pass-Through Agreement Between OLBI and City of Long Beach

Key Terms
• State receives 17.9% royalty
• City of Long Beach receives 2.5% “Pass-thru”
Belmont Offshore Redevelopment

Island Chaffee

-2500

-3000

-3500

City of Seal Beach

One Mile

Eastern Boundary of the Long Beach Unit

State PRC 186

Monterey Island

State 3095 (Operated by DCOR)

Extent of Ranger Oil Column

Esther Island

State 3095

(Operated by DCOR)
3-D View of Long Beach Unit & Belmont Offshore Field Wellpaths
Island Chaffee
Spill Prevention Equipment and Containment

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>Oil boom (30” Expandi 3000)</td>
<td>1000 ft</td>
</tr>
<tr>
<td>Oil boom (16” foam filled)</td>
<td>900 ft</td>
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<tr>
<td>Anchors</td>
<td>4</td>
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<tr>
<td>Crew and tug boats</td>
<td>available on call</td>
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<td>Vacuum Truck</td>
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<tr>
<td>Sorbent pads</td>
<td>75 bales</td>
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<tr>
<td>Sorbent blankets</td>
<td>15 rolls</td>
</tr>
<tr>
<td>Sorbent drums (55 gal)</td>
<td>25</td>
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- 12” curb height
- 54” cellar walls
- 7 cellars – 23,000 barrel capacity
Original Belmont Development Plan

Drill in low WOR area
Offset good rate wells
Peripheral injection

- Phase 1 Producer
- Phase 2 Producer
- Phase 2 Injector
- Existing LBU Injector
- C332A
C-332rd1 Open Hole Log (M1 Sand)

Flow Unit Boundary

2 Oil Columns with Partial Sweep at Base
C-332rd1
First Producer

- ‘Standard LBU vertical’ (50º) redrilled OHGP completion (7” intermediate casing & 3-1/2” WWS)
- 73º sail section for 4300’
- 500’ completion interval
- Running casing was difficult
- Initial oil rate 450 bopd
- Reservoir pressure higher than expected
- Repressurization after 10 years
- Higher rates, recoveries, fewer wells needed
Drilling Challenges

- **Must deal with anti-collision (LBU & P&A’d Belmont wells)**
- **Maintain high penetration rates & drill high quality hole**
- **Minimize tripping for bits & logging tools**
- **Overcome torque & drag effects on drilling/running casing**
  - Long reach, high angle sail sections (almost 5000’ to the near lease line, 8000’ to the far lease line)
  - Slide drilling is required in horizontal completion intervals & to drop angle at the end of the injectors
  - Casing must get to bottom
- **Geological interpretation is critical**
  - More difficult with directional survey depth uncertainty
Drilling Solutions

- **Anti-collision Issues, Geological Interpretation:**
  - Generated Belmont directional survey database from scratch
- **Drilling Performance (ROP, Minimizing Roundtrips):**
  - Used a steerable 5 blade Smith PDC bit, Top drive on 4th well and wells after
  - Drilled surface shoe with directional assy & LWD built angle
  - Used KCl/gelite mud (clay swelling) & high circ rate
Drilling Solutions (cont’d)

- **Torque and drag effects while drilling:**
  - Chose wellheads that allowed two dimensional well plans to be drilled, when targets allowed
  - Modeled with torque & drag software
  - Set surface casing through the build section
  - Maximized rotational drilling
  - Adjusted BHL’s to minimize “late turns”

- **Torque and drag effects while running casing:**
  - Spotted lube pills prior to running casing
  - Stopped and circulated when running casing
  - Drilled larger hole in two wells (9-7/8” vs. 8-3/4”)

Belmont Field: Top M1 Structure

Current Status

- C-332A
- C-232
- C-230I
- Possible injector
- Redrill injector
- C-236 Drilling
- C-301
- C-247
- C-234I
- C-237I
Change of Plans (horizontal producers)
Upper Zone Cross-Section showing three M1 sand lobes

LOCATOR MAP: Structure Top M1

Plan for Sub-Horizontal Wells C-301st1, C247st1
C-301st1 & C-247st1
Horizontal Producers

• Drilling horizontal OHGP producers has allowed:
  – longer completion intervals (1000’ to 1300’)
  – production from all three M1 sand lobes
  – oil rates to be accelerated
  – fewer wells to be drilled
• These are ‘Standard LBU horizontal’ new OHGP completions (7” intermediate casing & 3-1/2” wire wrapped screens)
• Completion angles are 82° to 85°
• Landing these horizontals was difficult because they needed to be ‘turned’ into the structure
• C-301st1 drilled fast, but had 3 tool failures & OH sidetrack
• C-247st1 had great drilling performance, in spite of sidetrack
• Oil rates were 300 bopd (C-301st1) & 800 bopd (C-247st1)
C-332rd1, C-301st1, C-247st1 Wellpaths
C-230I, C-234I, C-237I Water Injection Wells

- All are down dip water injectors on the far side of the lease
- All have high angle sail sections (C-237I had 6300’ at > 70°)
- All are long reach (C-237I had a 2.6:1 ratio of md/tvd)
- Drilled “two dimensional” well plans from optimal wellheads
- Decided to drill 9-7/8” hole in C-237I to decrease risk
- Excellent drilling performance
Two Dimensional Well Plans

C-237I, C-234I, C-230I
Lower Zone (UP Ford) Drilling Status

- The Lower Zone producers will be completed as cased hole frac & fracpack completions

- Wells C-238 and C-354 were drilled and completed into the Lower Zone in June 2006

- Two injection wells are planned for this year

- Phase II and III Development to proceed and be evaluated based on results from first two producers and injectors.
<table>
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<tr>
<th>Well Number</th>
<th>Zone</th>
<th>Well Type</th>
<th>Compl. Date</th>
<th>TD md</th>
<th>TD tvd</th>
<th>Actual Cost, $M</th>
<th>IP bopd</th>
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<td>Upper</td>
<td>ROHWGP</td>
<td>Jun-05</td>
<td>7365'</td>
<td>3333'</td>
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<td>7554’</td>
<td>3374’</td>
<td>$1.1</td>
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Belmont Redevelopment Recap

- Six producing wells and three injection wells
- Oil production is 240 MBO in less than 1 year
- Current Oil Rate 1456 BOPD for August 2006
- Drilling performance is improving
  - Best performance drilling production hole (1249 fpd)
  - Beat estimate by 7.5 drilling rig days (4 days < target)
- C-301st1 is longest horizontal from Islands (8060’ md)
- Actual costs are 4% below estimate. Average drilling rig time is 3.5 days below estimate (without C-332rd1)
Overview

• Recovery of substantial oil reserves left behind
• Oil Island and associated facilities removed
• Oil spill risk minimized by transferring operation to state of the art facility
• Increased revenues to the State and City of Long Beach

Opportunities

• Develop unrecovered reserves using existing infrastructure
• Develop new areas from existing offshore infrastructure or sites based onshore
Acknowledgements

Belmont’s success is a team effort. The team includes:

- Oxy Long Beach Inc. (OLBI) and Thums Drilling Engineers, Reservoir Engineers, Geologists, and Drill Site Managers
- California State Lands Commission
- Long Beach Gas and Oil Department
- Ensign Drilling Crews
- Inteq Planners and Directional Drillers
- MI Drilling Fluids
Questions?